

IRON DEFICIENCY ANEMIA AMONG PREGNANT WOMEN IN SHKODRA DISTRICT: PREVALENCE, KNOWLEDGE, ATTITUDE AND PRACTICES

Emirjona Kraja¹, Tatjana Caja², Ela Petrela³

¹Regional Hospital of Shkodra, Albania, E-mail address: emi_kraja@yahoo.com

²Mother Tereza Hospital, Tirana, Albania

³Mother Tereza Hospital, Tirana, Albania

Abstract

This study aims to assess the prevalence of IDA in pregnant women, to detect and assess knowledge, attitudes and practices of these women against IDA, which are followed by the consultation of them in the district of Shkodra. This study was conducted during the period October 2010-May 2012. 1000 women were studied and taken into consideration, where 202 pregnant women were anemic, (202: 10 first trimester, 72 second trimester, 120 third trimester, age group (15>40) years. Of 202 anemic 130 women were living in the city and 72 in the village. Blood samples were taken from every woman and a questionnaire was filled at the time of obtaining blood. Hb and serum ferritin were measured and the data collected was analyzed using SPSS. The age group (25-29) years indicates a higher prevalence percentage at IDA (34.6%) among anemic women group. Education, employment status, number of pregnancies, the interval between them, their social and professional conditions appear to have an effect on the status IDA with a prevalence of (50.0%). Employed women, those with more years of education, higher incomes had lower prevalence of IDA (11.9%). The current use of iron supplement as a main curative measure of IDA appears to have very good effects by reducing the proportion of IDA prevalence. The study shows a high level of knowledge in the pursuit of cases, symptoms, food sources rich in iron, the importance of iron supplements and its absorption related to anemia among the group with IDA before the treatment and that after the treatment of IDA.

Keywords: *anemia, blood, pregnancy, Shkodra.*

Introduction

Iron deficiency anemia is a serious problem affecting more than 700 million people worldwide Dawood et al. (1990). It is more significant in developing countries (59.0%) than in the industrialized countries (14.0%), DeMaeyer (1989). Pregnancy, childbirth and lactation are emptying largest iron reserves of women Halper et al. (1987). IDAs previous studies have found a prevalence of 39.7% in Kuwait, Dawood et al. (1990), 78.0% in Liberia Jackson and Lantham (1982), 73.9% in Guyana Johnson et al. (1992), 61.0% in Jamaica, Simmon et al. 1982), 50.0% in Bahrain, Aldallal (1984), 22.01% in Egypt, National nutrition survey (1978) and 19.8% in Northern Ireland. Strain et al. (1990) The data presented in Table 1 shows the prevalence in the world iron deficiency and iron deficiency anemia. Duran (2000).

Table 1. The prevalence in the world of ID and IDA

Region	Population with iron deficiency anemia (million)	Prevalence of anemia in pregnant women (%)
Africa	206	52
America	94	40
Europe	27	18
Eastern Mediterranean	149	50
Southeastern Pacific	616	74
Western Pacific	1058	40
Developed countries	-	18
Developing countries	-	56
Total	2150	51

Material and methods

In this study we have included pregnant women who are resident in the district of Shkodra. Data were obtained from three family planning centers both in the urban area and a rural center. Data collection was done in October 2010 - May 2012. All women provided information on a voluntary basis and completed questionnaires. The questionnaire included knowledge about diet and anemia history, social conditions, weeks of pregnancy, number of pregnancies, the interval between pregnancy, smoking or non-smoking. The data were obtained on the basis of questionnaire and laboratory examinations of blood. Basic blood parameters are selected in accordance with OBSH standards. A pregnant woman is considered anemic if Hb <11.0 g / dl. Data were treated using the SPSS program. There were studied a total of 1000 pregnant women in the district of Shkodra.

Results and Discussion

The prevalence of IDA of the pregnant women in Shkodra

This study was conducted during the period October 2010 - May 2012. There were taken under consideration and study 1000 pregnant women, where 202 pregnant women were anemic. (202: 10 first quarter, 73 second quarter, 119 of the third quarter, age group (15 to 40). Of 202 anemic 130 women were living in the city and 72 in the village. The percentage prevalence of IDA was at 20.2%. The prevalence of IDA was in the third trimester (59.4%) compared to the second trimester (35.6%) and in the first trimester (4.95%). $p = 0.011$ The prevalence of anemia among women living in rural areas (21.2 %) was higher than that of women living in the city (19.7%), however, differences in the percentage of prevalence don't have a statistical significance ($P = 343$). Age groups between (25-29) years showed the highest prevalence rate of IDA (34.6%) among anemic women group. Education, employment status, and monthly incomes seem to have effect in the IDA status of employed women, those with more years of education, higher incomes. A slight prevalence percentage increase of IDA was found increasing the number of pregnancies, also a shorter interval between births showed this effect. Palestinian National Authority (2005)

Table 2. Prevalence of iron deficiency anemia in our study.

Year	Nr. of pregnant women	Nr. of not anemic women	Prevalence of not anemic women	Nr. of anemic women	Prevalence of anemic women
2010-2012	1000	798	79.8 %	202	20.2 %

According to the OBSH anemia above 40% in women and children is considered severe and between 20-39% is considered as a moderated problem. In Shkodra region, the prevalence of iron deficiency anemia is 20,2% and it is a moderated public health problem.

Knowledge about IDA among the studied population

From the processing of questionnaires for the knowledge iron deficiency anemia came out the following results:

Inadequate levels of knowledge were reported by the group of participants in the definition of anemia where 42.5% were able to bind respectively with bad nutrition anemia, 37.6% and 35.1% iron deficit with low levels of Hb. Knowledge regarding the symptoms associated with IDA were found at levels as, general weakness, fatigue 39.6%, dizziness and fainting 37.1%, headache and pallor of the face, lips and nails 42.5%. Inadequate levels of knowledge were found among the studied population in terms of causes of ferredeficit anemia. Anemic pregnant women respectively reported as major causes: poor feeding 42.5%, bleeding 30.6%, multiple pregnancies and spaces between them 41% and the use of contraceptives 11.4% and 30.1% were not aware of the connection of pregnancy with age as a likely cause of ferredeficit anemia. Knowledge about iron supplement and its effect on the health of the mother and child were found in insufficient levels of 39.6%. 35.6% of the participating women with IDA answered "Yes" about the effects of iron-taking in the health of the mother and baby. However, knowledge regarding the preventive role of iron supplements for anemia were low 38.6%. See fig.1.

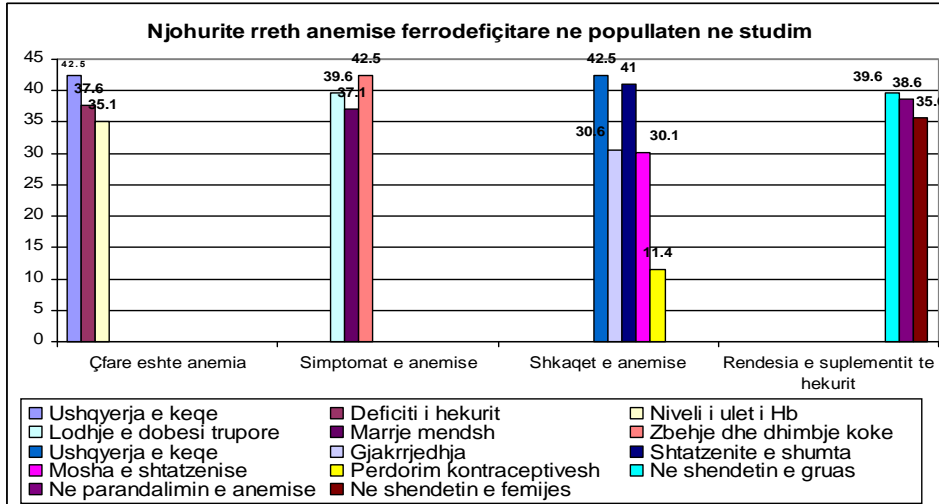


Fig 1. Knowledge about iron deficiency anemia in the population under study

In general, you can see the low knowledge about the impact of anemia on the health of women. This is apparent from the findings of 23.7% for postpartum anemia and 12.3% for low birth weight. Knowledge of the importance of using iron tablets after meals and its effect in reducing nausea and vomiting were low and only 16.8% of pregnant women with ferodeficit anemia were aware of this fact. On the other hand, knowledge about the effect of tea, coffee and milk in the absorption of iron levels were very low 7.9%. They were not aware of the fact that iron absorption is inhibited by tea and coffee but increased by ascorbic acid which is in orange juice and fresh fruit. Bridget (2005) Knowledge concerning the use of antacid and their effects in reducing the absorption of iron were also at low levels only 4.9% of them were aware. It is important to note that inadequate levels of knowledge were also found with regard to blood transfusion. 31.7 % of anemic women were informed about blood transfusion and 30.7% of them admitted blood transfusion. Pregnant women with iron deficiency anemia in the studied population reflect a low level of knowledge about ferodeficit anemia, see fig.2.

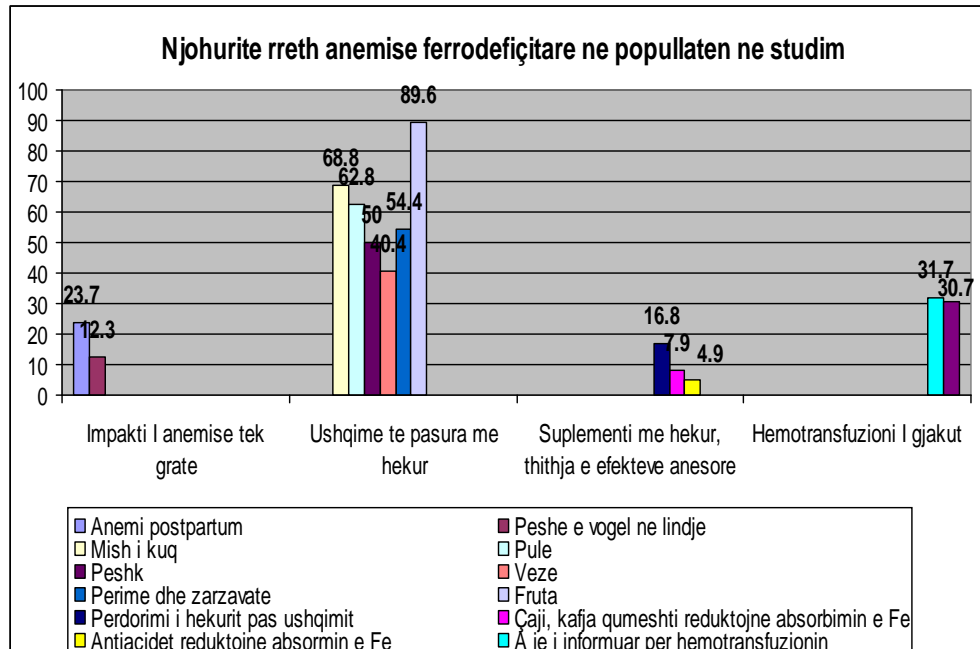


Fig 2. Knowledge about IDA among the studied population

Attitudes about IDA among the population under study

A positive attitude was observed in terms of the importance of attendance in pregnant women clinical centers. It is clear from the findings that 99% of the participants agreed with the importance of this visit. An increasing positive attitude is found regarding to the daily use of iron supplements during pregnancy. It is clear from the findings that 99% approve the use of iron supplements. A positive attitude is found about marriage at a young age, 99% of our group with iron deficiency anemia dont approve early marriages. A positive attitude about the disapproval of multiple pregnancies was reported by 89.2% of the studied group. Positive attitudes about family planning methods were also found between the studied group and 49.5% accept family planning methods compared to 50.5%. A positive attitude about pregnancy at old age is evident from the findings in the studied group with 99%. Such findings reflect a lack of knowledge regarding to complications associated with pregnancy at that age. A positive attitude is found about the importance of taking iron supplements in relation to maternal and child health. This was evident from the findings with 97.5% who recognize the importance of taking iron supplements on maternal and child health. The women in the studied group also appear to have positive attitudes about the need for regular visits to the local clinics after birth with 94%. A positive attitude about not using tea with meals was 95.1% clear. A negative attitude was reported regarding to the use of iron supplements related to fruit juice was found that only 49.5% approve the use of fruit juice with iron supplements, which reflects the low knowledge about the

role of fluid fruit to increase the absorption of iron. Positive attitudes regarding to taking iron supplements after meals were also clear from the findings of 84.1% to approve the use respectively in our studied group. Positive attitudes about the use of three regular meals were also reported by 99%, see fig.3.

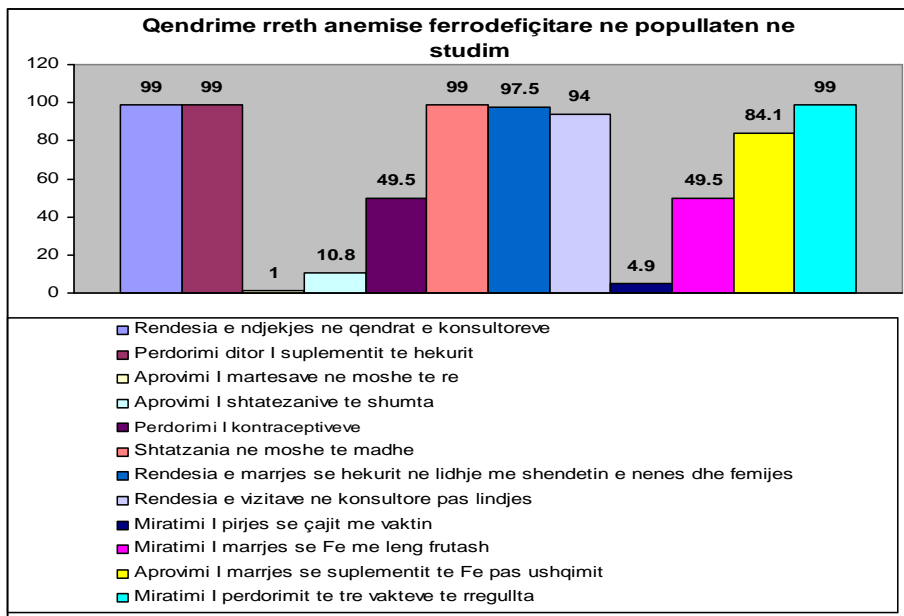


Figure .3 Attitudes about IDA among the population under study

Practice of iron deficiency anemia among the studied population

It took a few questions to assess practices (habits) of the study sample about iron deficiency anemia. Regarding to eating strange substances during pregnancy only 1.4% of women with IDA were reported with these habits. Research has shown that women who eat substances like ice, different residues, baby powder and other no nutritional substances, tend to have low levels of hemoglobin at birth. Rainville (1998) Studies have found a link between severe iron deficiency anemia and the desire for no nutritional substances such as ice, paper or clay. Bridget (2005)

Regarding to the use of tea during meals, a low percentage seems to practice it 8.4%. This is a practice that has to do with the use of tea and its inhibitor role in iron absorption. Inhibitors of iron absorption include poliphenoles (in some vegetables), tannins (in tea), calcium (in daily products). Bothwell (1995), Siegenberg et al. (1994)

Taking iron tablets with orange juice or vitamin C enhances iron absorption. A poor practice was also found regarding to the use of fruit juice with meals in order to increase the absorption from non-animal sources 51.9%. Regular use of the iron supplements was reported in 99% of women with iron deficiency anemia. The practices reflect the positive attitude of the population reported in the study and in accordance with the data reported for the effects of iron supplementation and its role in improving Iron status in pregnant women. Taking iron tablets on an empty stomach makes greater absorption potential but can give annoyance to the stomach depending on the dose. Taking iron with or after food may reduce concerns but can also reduce the absorption of over a third. Fogle (2006) The use of iron supplements after meals is another good practice

reported by the studied population and 47% of women with ferredoficit anemia seem to practice this habit. The importance of at least three regular meals as a practice for pregnant women appear to be recognized and it is clear from the findings that 84.1% of women with IDA practice this habit. Use of antacid with iron supplements can make iron supplements less effective. Our data shows that the use of antacid is limited, so their role in iron deficiency anemia can not be judged and only 3.4% of women with IDA report antacid use. Iron deficiency is more common among women with diets high in calcium amount received per day. Rangan and Blight (1996) In our study, the practice of taking iron supplements with milk or its products as sources rich in calcium, only 4.9% report this practice. These findings reflect an acceptable good practice. Iron deficiency is more common among persons with diets poor in vegetables. Legget et al. (1990). The practice of taking foods rich in iron (plant and animal origin) is reasonably acceptable to 59.4% of women with IDA report the use of foods rich in iron, see fig. 4.

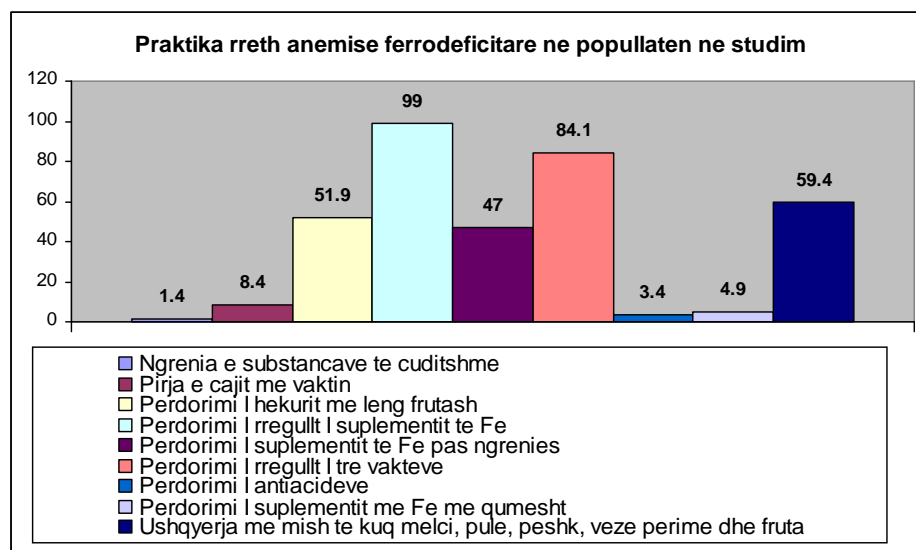


Figure 4. Practice of iron deficiency anemia among the studied population

Conclusions

Iron deficiency during pregnancy appears to lead to a constant iron deficiency during lactation and longer, and it takes time to replace iron stores that are depleted. For this reason it is important to prevent the development of IDA in women during pregnancy. Percentage prevalence of iron deficiency anemia in pregnant women in the district of Shkodra was 20.2%.

Prevalence of IDA in the third trimester was (58.91%) compared to the second trimester (36.14%) compared to the first trimester (4.95%). It is noticed a much greater prevalence in the third trimester. The prevalence of anemia among women living in the city was (19.7%) lower than that of women living in rural areas (21.2%). The percentage of prevalence of IDA observed in this study is moderate, close to those found in the region. Positive attitudes were found about the importance of regularity of visits at the clinic centers, the use of iron supplements, many pregnancies and the approval of the use of three regular meals. Negative attitudes were found regarding to the improvement of marriage at a young age and pregnancies in old age.

The positive practice about IDA among the studied population were found regarding the use of regular iron supplement, regular use of three meals and feeding red meat, liver, chicken, fish, eggs, vegetables and fruits. Negative practices were observed regarding drinking tea and using nutritional meal supplement with iron milk or any milk product. In conclusion, despite the fact that health care strategies seem to be planned according to international recommendations do not seem to have the proper effect in improving the prevalence of IDA and here there is a great need for the further promotion of health education programs in this direction.

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